

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Previously Presented) A method of producing a thin film using opposing electrodes, said method comprising the step of:
applying a pulse voltage on said opposing electrodes under a pressure of 100 to 1600 Torr in an atmosphere comprising a gaseous raw material including a carbon source to generate discharge plasma so that a thin film, comprising diamond like carbon having a Raman spectrum comprising a main peak at about a wave number of 1580 cm^{-1} and a shoulder peak in a wave number range of 1300 cm^{-1} to 1500 cm^{-1} , is formed on a substrate, wherein said pulse voltage has a pulse duration shorter than 1000 nsec.
2. (Original) The method of claim 1, wherein said pulse voltage has a pulse rise time of 1000 nsec or shorter.
3. (Original) The method of claim 1, wherein said pulse voltage has a pulse fall time of 1000 nsec or shorter.
4. (Cancelled).
5. (Withdrawn) A thin film produced by the method of claim 1.
6. (Cancelled).
7. (Withdrawn) The thin film of claim 5 having a hardness of 10 GPa or higher.

8. (Currently Amended) ~~The method of claim 1~~ A method of producing a thin film using opposing electrodes, said method comprising the step of:
applying a pulse voltage on said opposing electrodes under a pressure of 100 to 1600 Torr in an atmosphere comprising a gaseous raw material including a carbon source to generate discharge plasma so that a thin film, comprising diamond like carbon having a Raman spectrum comprising a main peak at about a wave number of 1580 cm^{-1} and a shoulder peak in a wave number range of 1300 cm^{-1} to 1500 cm^{-1} , is formed on a substrate, wherein said pulse voltage has a pulse duration shorter than 500 nsec.

9. (Previously Presented) The method of claim 1, wherein the atmosphere further comprises at least one gas from group VIII of the Periodic Table.